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Competition and Media Performance: A Cross-National Analysis of Corporate Goals of Media Companies in 12 Countries

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Despite digitization and platformization, mass media and established media companies still play a crucial role in the provision of journalistic content in democratic societies. Competition is one key driver of (media) company behavior and is considered to have an impact on the media's performance. However, theory and empirical research are ambiguous about the relationship. The objective of this article is to empirically analyze the effect of competition on media performance in a cross-national context. We assessed media performance of media companies as the importance of journalistic goals within their stated corporate goal system. We conducted a content analysis of letters to the shareholders in annual reports of more than 50 media companies from 2000 to 2014 to operationalize journalistic goal importance. When employing a fixed effects regression analysis, as well as a fuzzy set qualitative comparative analysis, results suggest that competition has a positive effect on the importance of journalistic goals, while the existence of a strong public service media sector appears to have the effect of "crowding out" commercial media companies.

Keywords: media performance, competition, public service media, fuzzy set qualitative comparative analysis, fixed effects regression

Even in times of increasing digitization, networked media, and the emergence of powerful platforms (van Dijck, Poell, & de Waal, 2018), traditional media companies still play a crucial role in democratic societies. This is particularly because they are expected to contribute to the fulfillment of media's democratic functions,

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a concept often referred to as *media performance* (Christians, Glasser, McQuail, Nordenstreng & White, 2009; McQuail, 1992). It is vital to understand which conditions improve media performance to be able to find the right policies to promote high-quality media production and eventually foster a functioning media system that serves democracy and the public interest. Especially in light of rising concerns that digital platform and tech giants are not sufficiently fulfilling their societal role in maintaining a functioning public sphere (e.g., in terms of misinformation, hate speech, or echo chambers), the importance of traditional journalism for democratic states has become even more evident (e.g., Pickard, 2020).

One of the most debated relationships in this domain is the effect of competition on commercial media companies' journalistic performance. Although it is one key driver of company behavior, theory and empirical research are ambiguous about its effect on media performance. The financial commitment approach (FCA), for instance, hypothesizes a positive impact of competition on media performance (Litman & Bridges, 1986). The hypercompetition approach also expects positive effects, but only for low levels of competition, and a negative effect beyond a certain threshold (Hollifield, 2006). Media bias research grounded in economics literature has dealt with the effects of competition on the accuracy and impartiality of media reporting and has presented conflicting ideas on the sign of the effect of competition on media bias (Besley & Prat, 2006; Mullainathan & Shleifer, 2005).

In addition, despite globalization, most of the empirical research on media performance has been restricted to one country or region. The first studies on FCA, for instance, focused on regional U.S. markets, others on the Netherlands (Van der Wurff & Van Cuilenburg, 2001) or the European media market (Russi, Siegert, Gerth, & Krebs, 2014). Amid increasing media convergence, those studies are mostly limited to one specific media market, usually TV or newspapers; newer studies also have addressed online news (e.g., Humprecht, 2016). Cross-cultural quantitative analyses are the exception and only exist—at least to our knowledge—for developing countries (Hollifield, 2006). Thus, especially in the light of globalization and media convergence, an empirical assessment of the effects of competition on media performance in a cross-national setting and across media industries is still a research gap that needs to be addressed.

We attempted to tackle this issue by collecting data about the corporate goal system from 46 media companies in 12 countries and five continents to answer whether increasing competition intensity—measured as the Herfindahl–Hirschman Index (HHI) and the National Media Power Index (MPI)—and the existence of strong public service media affect commercial media companies' media performance. Our results address the persisting research gap and provide media policy implications.

We contribute to existing research in four ways: (1) We measured media performance in a novel way by conducting a content analysis of letters to shareholders of annual reports from media companies from 2000 to 2014 explicitly seeking the mention of corporate goals. This allowed us to come up with a quantitative measure of the relative importance of stated journalistic goals in media companies. We deliberately focused on established media companies because they are expected to continue producing and distributing journalistic content, something that is not generally demanded of new global tech players. (2) We analyzed our data employing two empirical analysis techniques to answer our research questions, namely a fixed effects regression analysis and a fuzzy set qualitative comparative analysis (fsQCA). These two approaches are different in their causal analysis (correlation-based vs. Boolean algebra), yielding a

much broader and more conservative analysis. (3) With our cross-national data set, we were able to grasp a fundamental transition in media systems worldwide, significantly expanding the scope of existing research in this domain, providing new opportunities regarding the generalizability of the results. (4) We explicitly assessed the effect of competition from public service media (PSM) on commercial media companies' media performance and therefore differentiated between competition from commercial media companies and PSM.

With this article, we particularly intend to contribute to the progress of knowledge in the field of media competition and media performance studies by addressing persistent research gaps. However, the article also supports media policymakers and regulators to select the right means to strengthen media performance among national media markets.

Literature Review on the Effect of Competition on Media Performance

Media Performance

Media performance describes the fulfillment of media's democratic functions by certain actors (e.g., commercial media companies) measured against normative criteria. Although there is no general consensus on these criteria or their respective relevance (Christians et al., 2009; McQuail, 1992; Müller, 2014), according to McQuail (1992), criteria for media performance can be derived from the basic democratic principles of freedom, justice/equality, and order/solidarity. Taking these as a basis, concrete standards can be derived regarding the democratic requirements and public roles of media companies, such as accuracy, completeness, and neutrality in reporting (McQuail, 2008). If these standards are met, the mass media best serve the public interest by maximizing the democratic values of freedom, equality, and order. This allows for a "systematic critical analysis of the conduct and content of mass media in pursuing their stated or expected objectives" (McQuail, 2016, p. 1). We thus understand media performance as the degree to which mass media fulfill their democratic functions and best serve the public interest.

Because our article focuses on the effect of competition in media markets on media performance, in the following, we review previous research that has dealt with the influence of competition on specific facets of media performance. First, we discuss the financial commitment approach (FCA) as well as the hypercompetition approach (HA). Both of these approaches explicitly focus on the effect of competition on media performance. To broaden the scope, we then also consider media diversity, media bias research, and ownership consolidation research, all concepts that are related to media performance. Although these concepts are not explicitly tested in the empirical part of this article, they still provide valuable insights into the general relationship between competition and media performance.

The Financial Commitment Approach (FCA)

The FCA is the most frequently discussed and reviewed theory. The term *financial commitment* was originally introduced by Litman and Bridges (1986) and later clarified by Stephen Lacy and other scholars (Lacy, 1992; Lacy, Atwater, & Qin, 1989; Lacy, Fico, & Simon, 1989).

FCA explains the relationship between competition and media performance in a four-step model. In the first step, depending on the intensity of competition in the media market, a media firm has to choose what Lacy (1992) defines as “the amount of money committed to news content” (p. 8). In a highly competitive market, given a substitutional relation among the competitors, the necessity to attract customers through differentiated high-quality content becomes more relevant. Step 2 hypothesizes a positive correlation between the budget for news content and the quality of the content. Thus, a high degree of financial commitment should result in high content quality. Although the definition of content quality varies, the model assumes that journalists follow a certain code of quality journalism labeled by characteristics such as “fairness, balance, and completeness” (Lacy, 1992, p. 8). These are closely related to criteria for media performance (Christians et al., 2009; McQuail, 1992). Step 3 states the recipient’s utility to increase with raising content quality, given the assumption that journalists and audiences share the same definition of quality journalism. Step 4 draws the final expectation that increasing the recipient’s utility leads to a higher attractiveness of the medium, which results in increasing circulation and therefore better market performance.

In particular, Step 3 of the approach—that higher journalistic quality leads to higher demand—is subject to debate. On the one hand, higher quality news appears to have a positive impact on demand, especially when it is signaled to readers and viewers through journalism awards (Logan & Sutter, 2004; Wellbrock & Wolfram, 2019). On the other hand, demand for journalistic quality has also been modeled in a curvilinear fashion, such that certain parts of the audience do not value higher quality in this regard (Battaglion & Vaglio, 2018; Lerach & Wellbrock, 2011).

In the cases of newspapers, TV, and radio, research has generally supported the hypothesis of a causal relation between financial commitment and the media performance of the outlet (Russi et al., 2014). Before and after the publication of Stephen Lacy’s approach, scholars have found evidence for the likelihood that competition intensity increases financial commitment to news production (Busterna, 1980; Cho, Thorson, & Lacy, 2004; Lacy & Blanchard, 2003; Litman & Bridges, 1986). Yet, the model underlies certain time and regional boundaries. The studies that were taken as a basis for the model’s assumptions and causalities were predominantly examined from the mid-1980s until the end of the 1990s. Furthermore, they focused on local U.S. newspaper markets. These markets are characterized by an oligopolistic, or even duopolistic, market structure. It is questionable whether the linear effects of the model can be applied to other market structures (Lacy, 1992). Despite these doubts, Lacy and Riffe (1994) argue that the availability of resources and the gained profit might also have an impact on the financial commitment. The restrictions led scholars to extend the model and develop an approach that takes the boundaries into account.

The Hypercompetition Approach (HA)

The extension of the FCA is the HA, which supplements the potential adverse effects of competition on media performance in hypercompetitive markets (Becker, Hollifield, Jacobsson, Jacobsson, & Vlad, 2009; Hollifield, 2006). These two approaches can be considered part of the same theoretical approach. Instead of an infinite linear relationship between competition and media performance, as it was supposed in markets with a low-to-moderate degree of competition (oligopolies, duopolies), the HA states that competition for limited resources leads to a threshold beyond which competition has a negative effect on media performance.

Hollifield (2006) argues that if the degree of competition and the market size are not growing proportionally, the case of higher competition (increasing number of media organizations) and limited resources (e.g., limited number of professional journalists) favor a negative development of content quality. The model expects that as soon as the degree of competition exceeds the threshold of low-to-moderate competition, profits decline, financial commitment to news production declines, and low-cost strategies of product differentiation are put into place to compensate for the losses rather than investing in content quality. The state of hypercompetition causes critically low profit levels for competitors, followed by expenditure cut-offs, and ultimately market exits as the final result.

The model therefore presumes that the relationship between competition and media performance has to be curvilinear, although the optimum level of competition, which ensures the highest quality of journalism, is difficult to identify both empirically and theoretically. As a consequence, empirical evaluations of the approach are scarce.

A prime example for an empirical test of the theory is the work of Becker et al. (2009), who used secondary data from 20 countries with emerging, highly competitive media markets gathered by the International Research and Exchanges Board. They treated the gross domestic product of the countries as a rough surrogate for advertising resources and divided it by the total number of media outlets to measure market competition. The study concluded that moderate competition in the market leads to higher journalistic quality, whereas a higher degree of competition may have a negative impact on news quality. Even though the findings of their study are tentative, the research provides a valuable first step in finding evidence on the likelihood that high levels of competition can have negative effects on media performance.

Competition and Media Diversity

The second line of research used is the approach by Van der Wurff and Van Cuilenburg (2001). Already in 1999, Van Cuilenburg combined characteristics of the FCA with Hotelling's (1929) law of "excessive sameness" (p. 54). Van der Wurff and Van Cuilenburg chose media diversity as the determining factor of media performance and argue that ruinous competition favors excessive sameness, pointing in the same direction as the HA.

Van der Wurff and Van Cuilenburg (2001) argue that as competition intensifies, sensational content or content of major interest ensures more promising revenue streams because it tends to meet majority preferences: "Free media markets tend to excel in market conformity, but tend to fail in market dynamics" (Van Cuilenburg, 1999, p. 197).

Empirical tests of the model—based on analyses classifying content into program type categories and primarily conducted in the Dutch newspaper and television markets—have confirmed the hypothesis (Van Cuilenburg, 2007; Van der Wurff, 2004, 2005; Van der Wurff & Van Cuilenburg, 2001). More specifically, the researchers examined the possibility of a linear relationship between competition and diversity. Their findings generally support the model concluding that moderate and ruinous competition individually, and differently, affects diversity. These outcomes appear to match the general propositions of the HA.

Competition and Media Bias

A third projection is the theory of media bias. In economics literature, media bias is usually defined as a deviation from fair, balanced, and impartial reporting (Wellbrock, 2016). Other descriptions of the concept include “selective omission, choice of words, and varying credibility ascribed to the primary source” (Gentzkow & Shapiro, 2006, p. 2) and “a portrayal of reality that is significantly and systematically (not randomly) distorted” (Groeling, 2013, p. 133).

In this sense, the existence of media bias—violating journalistic quality standards such as fairness, balance, and impartiality—would consequently harm media performance given that complying with journalistic quality standards is necessary for a media product to fulfill mass media’s functions in a democratic society and support the democratic value system, as required by the media performance concept (McQuail, 1992).

If competition affects media bias, competition can also affect media performance via media bias. In this respect, the existence of media bias can directly or indirectly reduce media performance (e.g., Baron, 2006; Blasco & Sobbrío, 2012; Mullainathan & Shleifer, 2005). In contrast to the first two theoretical approaches, media bias research provides models for both a positive and a negative influence of competition on media bias and therefore media performance.

A common way to classify causes for media bias is to differentiate between supply side and demand side. On the supply side, owners (Anderson & McLaren, 2012), journalists, interest groups (Petrova, 2012), and advertisers (Ellman & Germano, 2009; Germano & Meier, 2013) might have an interest in skewing media reports. This can be driven by ideology, for example, when owners or journalists try to communicate their personal political beliefs because they think it is “the right thing to do.” It can also be economically driven, for example, because advertisers prefer favorable reporting about themselves, because journalists report in ways that maximize their career opportunities, or because owners run a media outlet to support their political or business careers.

Research in the supply side domain usually comes to the conclusion that competition reduces media bias (and therefore enhances media performance). The main reason behind this is that it becomes more expensive and riskier to “buy” favorable reporting for advertisers or interest groups because they would have to “bribe” more media outlets and, because those media outlets compete with each other, they have an incentive to expose incorrect behavior from competitors (see, e.g., Besley & Prat, 2006).

Concerning the demand side, the most common approach in explaining media bias is the incentive for profit-maximizing companies to meet consumer preferences. As individuals usually prefer information that confirms their prior beliefs and attitudes (confirmation bias) rather than accurate, balanced, and diverse reporting, profit-maximizing companies can have an incentive to provide ideologically slanted news (Mullainathan & Shleifer, 2005). A similar approach is presented by Sobbrío (2013) who does not focus on the (biased) dissemination of information, but its (biased) collection. In this world with heterogeneous consumer preferences, competition tends to increase media bias because companies will try to differentiate their products according to predispositions and consumers’ beliefs. Compared with the aforementioned

approaches, product differentiation does not come via quality (FCA) or diversity of opinions (Media Diversity), but via a distorted representation of reality that corresponds to consumer attitudes and beliefs (Anand, Di Tella, & Galetovic, 2007; Chan & Suen, 2008; Stone, 2011).

Ownership Consolidation in Newspaper Markets

In her study on the effects of newspaper mergers on welfare, Fan (2013) addresses several aspects that are associated with media performance and that relate to several of the above-mentioned approaches. Fan found that ownership consolidation of newspapers in the Minneapolis area led to decreases in content quality, local news ratio, and variety.

Fan (2013) measured content quality with an index consisting of the size of the news hole, the number of staff in opinion sections, and the number of reporters, a mixture of content-related measurements (size of the news hole) and financial commitment measures (number of staff in opinion sections and number of reporters). Content variety was also—maybe surprisingly—measured according to the financial commitment approach as it refers to the allocation and concentration of staff across newspaper sections. This also holds true for local news ratio, a metric that might also be considered an indicator of media performance for local media outlets. This was measured as the percentage of local news staff over total staff and therefore not as an outcome variable.

Although Fan (2013) comes to the clear conclusion that a decrease in competition harms media performance, in the sense that it leads to decreases in content quality, local news ratio, and content variety, the study explicitly addressed only duopoly and triopoly markets. This leaves room for the key argument of other approaches that competition might have an adverse effect on media performance beyond a certain threshold of competition intensity.

Research Questions and Research Design

Research Questions

To sum up, existing research is ambiguous when it comes to the effect of competition on media performance. Whereas most authors come to the conclusion that an increase in competition should have a positive effect on quality commitment at low initial levels of competition (FCA, HA, some media bias studies), others argue the opposite (e.g., for higher levels of competition, some media bias approaches). Furthermore, previous studies have focused solely on single dimensions of media performance. We attempted to tackle both issues empirically at the company level by addressing media companies' corporate goals as communicated through letters to the shareholders in annual reports.

Competition, however, consists of different aspects, especially in the media industries. On the one hand, commercial media companies face competition from rival commercial enterprises. Therefore, our first research question reads as follows:

RQ1: What is the effect of competition intensity among commercial media companies on media performance?

On the other hand, a media-specific phenomenon is the existence of strong PSM in some countries that strongly differ from privately held, commercial players. Although PSM might serve as some kind of benchmark leading to a "race to the top" with commercial companies with regards to quality programming (e.g., British Broadcasting Company, 2013) and therefore improving media performance, the opposite "crowding out" effect could also occur (e.g., Armstrong & Weeds, 2007; Sehl, Fletcher, & Picard, 2020; Torii, 2017). The reason for this is that commercial companies might try to avoid competition with a better-equipped public competitor in the field of high-quality journalism by refraining from taking part in this particular content spectrum. This could be because (1) PSM are legally obliged to produce what is usually considered to be high-quality content in the public service sense; and (2) it is usually costly to produce this type of content, and strong PSM usually have an advantage in terms of resources in the form of license fees. Therefore, commercial media companies might be "crowded out" in markets with strong PSM, in terms of high-quality journalistic content, rather than competing in a "race to the top." This leads to our second research question:

RQ2: What is the effect of a strong PSM sector on media performance of commercial media companies?

Operationalization of Competition

We operationalized competition intensity by using concentration rates, namely the HHI and the MPI. Although there are also other popular concentration measures, such as concentration ratios (e.g., CR4 and CR8), we used the HHI and MPI first because they take into account all members of the industry (except for PSM, which was included separately). Second, the HHI is one of the most commonly used metrics for assessing market concentration and competition, both in academia and in regulation practice. The HHI is the sum of all squared market shares (in percentages) of all members in an industry, in this case, the media industry. It ranges between zero, where the share of each firm is infinitely small (indicating low concentration and high competition), and 10,000, where a single firm accounts for the entire market share (indicating high concentration and low competition). In addition to this, there was readily available data on media industry HHI for the countries in our sample from a single source (Noam, 2015).

Whereas the HHI is an industry-specific measure, the MPI is a cross-industry measure that takes into account weighted market shares that companies have in several media markets (e.g., print, audiovisual media, telecom, and search engines; Noam, 2015, p. 24). It ranges between zero and 10,000. The data were also provided by Noam (2015).

Operationalization of Media Performance

For the dependent variable, we assessed media performance of media companies as the importance of journalistic goals within their corporate goal systems. We operationalized this by conducting a content analysis of "letters to shareholders" in annual reports of media companies. Specifically, the dependent variable is the share of paragraphs in a letter that contains at least one journalistic goal.

Annual reports are regarded as a very useful source to study corporate goals. It is widely accepted that the topics mentioned in the letters reflect the preferred structure of top management and their strategic

commitments (Hauschildt & Hamel, 1978; Kaluza, 1982; Werner, 1990). Previous research in economics has shown that these letters contain relevant information to explain company performance and behavior (e.g., Smith, 2019). The established correlation between the content of these letters and company behavior produces an ideal setting to find new relations with other factors, such as competition.

Although the analysis of narrative portions, such as the letter to the shareholders, is an established method in economics, finance, and accounting research (Abrahamson & Amir, 1996; Li, 2010; Merkl-Davies & Brennan, 2007), to our knowledge, it is a novel way to measure media performance. Existing research on media performance has usually analyzed journalistic content (e.g., Humprecht, 2016; Wessler & Rinke, 2014), used organizational indicators and financial commitment (Hollifield, 2006), or relied on expert assessments (Lacy & Rosenstiel, 2015). The main advantages of our approach, compared with previous ones, include the comparability of the data between companies and countries, which has become particularly important in the context of the globalization of media and communication. Cross-company and cross-country comparability is usually difficult when depending on data generated from content analysis of the actual journalistic product (e.g., due to different journalistic traditions; Hanitzsch, Hanusch, Ramaprasad, & De Beer, 2019) or from organizational and financial commitment measures. These tend to be more subject to company size and cultural differences than letters to shareholders (which should follow similar standards, at least across the sample we used). Moreover, although content analysis of journalistic content can usually only measure certain aspects of media performance (e.g., analytical depth, critical distance, or topic diversity, as in Humprecht, 2016), we can interpret the importance of journalistic goals (as stated by the companies) as a measurement of the construct as a whole rather than measurements of selected aspects.

Against this background, we believe that a content analysis of letters to shareholders is an adequate way of empirically assessing corporate goals and thus media performance. We refrained from running a management survey because this is usually subject to many typical survey data problems. For instance, representativeness is hard to reach, mainly because of low response rates and possible self-selection biases. In addition, validation problems due to potential strategic and socially desirable answers also occur (Bednar & Westphal, 2006). Eisenbeis (2007), for instance, conducted both a management survey and a content analysis of letters to shareholders and in some parts came up with significantly different results. We believe this can be attributed to the aforementioned problems with management survey data.

Obviously, our measurement has its own weaknesses. First, the formulation of a goal does not automatically mean its implementation in corporate practice. Second, letters to shareholders are to a certain extent subject to impression management (Merkl-Davies & Brennan, 2007). However, managers can be held accountable for what they say in public, especially in a legal document such as an annual report. Despite these limitations, we applied the relative importance of journalistic objectives in letters to shareholders of companies' annual reports (measured as relative frequency of mentions) as a measure of media performance.

To analyze journalistic goals of media companies, we relied on a stream of literature pioneered in Great Britain by Tunstall (1971, 1972), who developed a categorical system that rudimentarily divides corporate goals into three types: an audience-revenue goal, an advertising-revenue goal, and a nonprofit

goal. Subsequently, Alter (1985) studied corporate goals of public service broadcasters in Switzerland through document analysis, including a content-related communication goal and classic corporate goals, to achieve a comprehensive list of 112 goals. Demers (1996) devised a survey comprising 21 goals for 409 managers, editors, and journalists of private U.S. newspapers to rate them according to their relevance. However, the lack of distinction between journalists and management clouds the results. Eisenbeis (2007) proposed a model that combines knowledge from empirical management studies and media management to deduce 28 corporate goal categories for media companies. He analyzed annual reports of eight German media companies and surveyed 101 managers and journalists from those companies. The study is an important precedent and role model in terms of assessing corporate goals. Similar to previous studies, there is no clear distinction between economic and journalistic goals, as one general "quality" category makes up the totality of quality goals, thereby not addressing the question of specific journalistic goals. Both Demers and Eisenbeis identified profits, circulation/reach, and customer satisfaction as the most important corporate goals for media companies.

Previous studies have acknowledged the issue of dualist corporate goals in media companies, and they account for the differentiation of purely economic goals that transcend industries and quality goals that are specific to media. Nonetheless, they either lack transparency in the determination of goal categories, or they subordinate the journalistic goals to the economic ones, assuming them to be inferior. The present study addressed this matter by providing a theory-driven list of corporate goals and establishing corporate goal categories that specifically refer to journalistic goals.

Table 1 shows a catalogue of 60 corporate goal categories. From these, 37 are of economic nature, 14 are journalistic, and nine are societal. With respect to economic and societal goals, we relied on established economic and business management studies, and journalistic goals were derived against the background of our conceptualization of media performance and in relation to previous studies on media companies' goal systems (Alter, 1985; Demers, 1996; Eisenbeis, 2007; Fritz, Förster, Wiedmann, & Raffée, 1988; McQuail, 1992; Schatz & Schulz, 1992; Stober, 1992).

Table 1. Corporate Goal Categories.

Economic	Journalistic	Societal
<ul style="list-style-type: none"> • Company continuance • Company success • Company size • Growth (unspecific, in general) • Competitiveness • Product quality (industrial organization-/business-/market- related definition) • Innovation • Product development • Service quality • Product portfolio • Customer loyalty • Customer satisfaction, satisfaction of consumer preferences • Satisfaction of advertisers' needs • Reach (TV ratings/circulation) • Company image • Core competencies • Revenue, sales • Cost(s) • Market share • Market power, market influence • Expansion, cooperation, networks • Consolidation, focusing • Corporate risk • Independence, autonomy • Profit; income; earnings; earnings before interest, taxes/earnings before interest, taxes, depreciation, and amortization; surplus; company result • Rentability, return on investment • Company value, shareholder value • Dividend • Liquidity, credit worthiness, credit rating, financial independence, accounts payable, debt, accounts receivable, allowance, financial basis • Capital structure, capital changes • Cash flow • Marginal return, contribution margin • Capacity utilization 	<ul style="list-style-type: none"> • Journalistic quality • Responsible reporters, standing of the newsroom • Effects of journalism on society • Fulfilment of media's democratic functions • Agenda setting • Serving as a public forum/sphere • Seismographic/early warning function • Activation function • Control and critique • Education • Entertainment • Information • Participation in public opinion making • Localism, local and regional focus, local and regional coverage and services 	<ul style="list-style-type: none"> • Political influence, public affairs, lobbying, influence on regulation • Corporate culture • Employee satisfaction, loyalty, responsibility for employees • Income and social security • Jobs • Sponsorships for social institutions, patronage • Diversity • Quality of life for society • Environmental protection

-
- Productivity, efficiency, effectiveness
 - Flexibility
 - Investment
 - Depreciation
-

Given that past empirical research has often neglected the role of journalistic goals in media companies, we primarily based our approach on criteria developed in media performance research (Christians et al., 2009; McQuail, 1992; Müller, 2014). As there is no clear consensus as to which criteria are the most important for democracy, we adopted a broad catalogue of democratic requirements and public roles of media companies and examined whether they manifest in media companies' goal systems. Even though journalistic goals could also be categorized as societal goals, we defined them as those goals that a media company aims to achieve through journalistic means (production and distribution of content and its impact). Societal goals, on the other hand, are often pursued by means of corporate social responsibility or lobbying and are not exclusive to media companies.

Summary

Summing up our approach, we employed a content analysis of letters to the shareholders in annual reports of 46 media companies from 2000 to 2014 to operationalize journalistic goal importance. We considered this a measure of media performance. We then paired these data with indexes and proxies for competition: the HHI for national media markets, the MPI (Noam, 2015), and a dummy variable for the existence of strong PSM. Figure 1 summarizes our research setting.

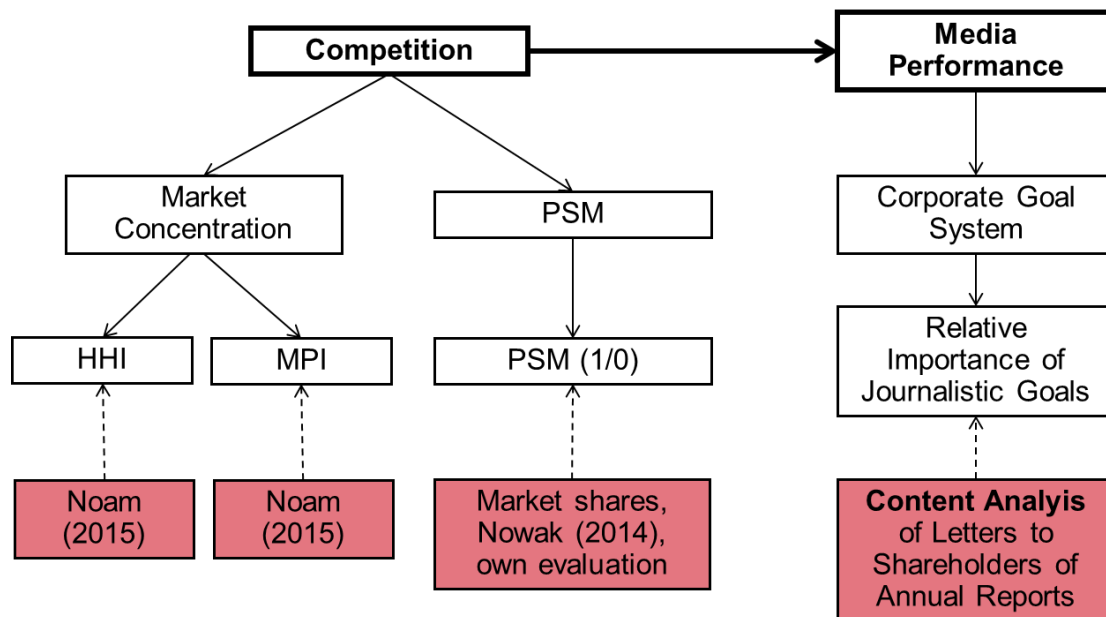


Figure 1. Operationalization of concepts. PSM = public service media; HHI = Herfindahl–Hirschman Index; MPI = National Media Power Index.

Method

Sample and Data

Country and company selection were mainly driven by data availability, in particular availability of annual reports and linguistic capabilities within the researcher team (English, German, French, Spanish, and Portuguese). Another necessary criterion was a Press Freedom Index status of “noticeable problems” or higher (“good situation,” “satisfactory situation”; Reporters Without Borders, 2013) to ensure a general orientation of the media system toward democratic values. We also aimed at a sufficient country size, in terms of population, of at least 20 million people to maintain comparability across countries.

A total of 46 content companies formed the database for this study, as displayed in Table 2. We defined content companies according to Noam (2015) as companies whose business model relies on the creation or publishing of content, and excluded platform companies (such as Comcast, Verizon, AT&T, and Bell Canada) that primarily engage in distribution.¹ We selected the largest available companies in each country according to revenue.

Table 2. Sample of Media Companies.

United States	Germany	Canada	United Kingdom	Australia		
Disney	Axel Springer	Astral	Guardian Media	APN News & Media		
Gannett	Gruener+Jahr	Rogers	Northern & Shell	Fairfax Media		
McClatchy	ProSiebenSat1	Shaw	Economist Group	Seven West Media		
News Corp	RTL		Archant Limited	Ten Network		
New York Times	Premiere/Sky					
Time Warner	Burda					
Washington Post	Madsack					
	Bauer					
	Bertelsmann					
South Africa	France	India	Spain	Brazil	Mexico	Argentina
Times Media	Groupe Bolloré	Zee Entertainment	Vocento	RBS	Televis	Clarín
Naspers	Lagardère Group	Network 18	Atresmed	Grupo		
Primedia	NRJ Group	H.T. Media	Mediaset			
Caxton/CTP	Vivendi		Prisa			

Concerning the independent variables, we used data on the HHI and MPI from Noam (2015). The lowest HHI value in our sample was for the United States in 2000 (618), and the highest was for Mexico for that same year (5,446). The lowest MPI score also came from the United States in 2000 (1,266), and the highest was observed in South Africa (7,058).

¹ This decision was confirmed after running separate analyses for content and platform companies, which yielded structurally different results.

We also included a variable for countries where PSM hold a significant portion of the audience share (>10%) and therefore become strong competitors for private media companies. PSM organizations are media companies that are publicly funded, legally obliged to serve the public, and are sufficiently independent of economic and political influences. Due to the last criterion being especially hard to objectively assess, we based our selection on existing studies dealing with categorizing public media (Nowak, 2014) and expert expertise. We considered the United Kingdom, Germany, and France media systems that are characterized by the existence of a strong PSM organization.

We studied the letters to shareholders in annual reports available from all companies, spanning the years 2000–2014.

We encountered some cases in which the largest company, or one of the largest, in a particular country is a foreign one, and the local branch of the company is included in the annual reports and shareholders' letters of the headquarters in the parent company's country. In these cases, the company was included only once for the original country and not in the foreign markets regardless of its audience, size, or share of the media market. Some companies investigated focus more on nonjournalistic content (e.g., entertainment media content). However, our central criterion was that they too offer journalistic products.

The analysis was conducted at the paragraph level of the letters to shareholders: Each paragraph was analyzed separately and each statement that qualified as a potential goal was coded from the list of possible goals as displayed in Table 1. The list allowed for open coding; however, this option was hardly used because the list was sufficiently developed. At the paragraph level, the coding determined whether a goal from the list of corporate goals was mentioned in each paragraph. The coding marked in binary terms whether the goal was present or not in each paragraph, holding the number of times it appeared in the paragraph irrelevant.

Methodologically, the role model for this study was the procedure used by Eisenbeis (2007). Typographically, paragraphs are bound within line brakes and often with a line. Headings, signatures, or emphasis lines out of the text were excluded in the coding, and general statements regarding external conditions or events (e.g., the state of the economy) were not considered goals and therefore were not coded.

In total, we analyzed 46 companies (see Table 2) in 12 countries, a total of 474 reports with 1,393 pages and 10,073 paragraphs. We found 21,267 unique goal mentions in 8,360 paragraphs; 1,710 paragraphs did not contain any corporate goals.

To assess intercoder reliability, a second coder coded a total of 32 letters to shareholders (6.75% of the total sample). Krippendorff's alpha values were good to very good for the three key variables derived from the content analysis (share of paragraphs with at least one journalistic, societal, and economic goal), yielding values of .8054 (journalistic goals), .7434 (societal goals), and .8609 (economic goals).

Regression Analysis

To assess the effect of competition on media performance, we first ran a fixed effects regression analysis. Apart from the variables that were of foremost interest for this study—HHI, MPI, PSM, journalistic goals—we added a set of control variables to the model. The first group of control variables were characteristics of every individual letter to shareholders in an annual corporate report. They included the length of the letter in number of pages and in number of paragraphs.

Various market performance indicators were also considered as control variables: revenue growth; earnings before interest, taxes/earnings before interest, taxes, depreciation, and amortization growth; net profit growth; self-reported market share; and whether or not the company is publicly traded. This last factor has been identified as relevant in determining the focus of private media companies through the assumption that publicly listed companies pursue different goals than family-owned or single-investor companies.

We also controlled for the general state of the economy and the economic state of the media industry. Proxies were gross domestic product growth rate, inflation rate, and unemployment rate (provided by the World Bank, 2015) and the growth rate of the national advertising market (provided by local entities in each of the countries, 2000–2014). From the aforementioned coding and variables, we estimated linear models including year fixed effects.

Fuzzy Set Qualitative Comparative Analysis

To our knowledge, Russi et al. (2014) were the first to apply fsQCA to a media-specific question. They addressed a very similar question by evaluating the relationship between competition intensity and financial commitment of newspaper companies in German-speaking countries. A more recent example of a study that used fsQCA in a media industry setting is Humprecht (2016). She employed QCA to investigate drivers of news performance in six Western democracies.

As opposed to regression analysis, QCA does not estimate the net effect of a single explanatory variable on the dependent variable, but rather seeks to identify necessary and/or sufficient conditions for an outcome. This set theoretic principle of causality explicitly allows for combinations of conditions to form necessary or sufficient conditions, which is a structural difference to regression analysis (Ragin, 2008) and where it is difficult to interpret three-way and higher interactions. One downside of QCA is that the number of explanatory conditions is more limited compared with regression analysis to yield meaningful results (Humprecht, 2016).

Whereas regression (and statistical analysis in general) depends on correlation and covariance between variables, QCA is a set theoretic approach and is based on Boolean algebra. A so-called truth table is created for all theoretically possible and empirically observed combinations of conditions and outcomes. In its basic version, conditions and outcome are represented in so-called crisp sets (i.e., in dichotomous variables that can either take the value one or zero). In general, a condition (X) is identified as necessary for the outcome (Y), when X is present in all cases where Y occurs. In other words, when Y is a subset of X , X is a necessary condition for the occurrence of Y (Schneider & Wagemann, 2007).

A condition is sufficient when X is a subset of Y (i.e., every time X is observed the outcome Y occurs). These relationships are not restricted to single conditions, but can also occur for combinations of conditions. QCA is also based on the concept of asymmetric causality of relationships: The existence of an outcome and its nonexistence need to be assessed in separate analyses (Schneider & Wagemann, 2007).

In the fuzzy set version of QCA (which was employed in this study), variable values are not restricted to be binary, but can also be partial members and therefore take values between one and zero. This provides more flexibility and yields a more realistic representation of reality when conditions and outcomes do not come in a binary fashion. At the same time, this also leads to a more complex procedure to identify necessary and sufficient conditions.

All in all, regression analysis and QCA follow different logic. Whereas regression analysis assumes that input factors can independently (and additively) explain the outcome, QCA allows for combinations of conditions to influence the dependent variable. In that sense, the two methods complement each other quite well as applying both in a parallel fashion can be considered a robustness check, not only across different models, but also across different logic of analysis.

When employing fsQCA, the observed values of the variables need to be calibrated to fit the (1;0) scale. The calibration procedure is of vital importance in the process because it has a heavy impact on the results of the analysis. Apart from full membership (1) and full nonmembership (0), another important anchor point is 0.5, which indicates the point of maximal ambiguity. The empirical values are then transformed into the fuzzy set accordingly, maintaining the relative differences between cases. Table 3 displays the qualitative anchors used in our study to calibrate the empirical values observed.

Table 3. Variables Included in the Fuzzy Set Qualitative Comparative Analysis.

Variable	Meaning	Empirical range	Set	Qualitative anchors
MPER	Media performance	0–1	High media performance	0.25, 0.1, 0.0
HHI	Hirschman–Herfindahl Index	618–5,446	High industry-specific competition intensity	1.500, 2.000, 2.500
MPI	National Media Power Index	1,266–7,058	High cross-industry competition intensity	1.500, 2.500, 4.000
PSM	Public service media	[0,1]	Strong public service broadcasting sector	Crisp set
REVGR	Revenue growth	–4.17–10.51	High revenue growth	0.45, 0.05, 0.00
NPGR	Net profit growth	–338.93–126	High profit growth	1, 0, –1

Membership in the set “high media performance” means that journalistic goals were mentioned in at least 25% of a letter’s paragraphs. This might appear to be a low value; however, considering that the objects of observation are primarily directed at shareholders, dominance of journalistic goals cannot be

expected. Due to the novelty of our approach and a consequential lack of other available theoretical and empirical reference points, we considered a 25% threshold reasonable.

Our measures for market concentration were calibrated according to regulatory practice standards from the U.S. Department of Justice and the Federal Trade Commission (2010). They consider markets with an HHI of 1,500 and lower to be highly competitive. Moderate competition is assumed at a value of 2,000, and markets with an HHI of above 2,500 exhibit low competition. Accordingly, the anchor points are 1,500 (full membership), 2,000 (maximum ambiguity), and 2,500 (full nonmembership), so that membership of the set of "high industry-specific competition intensity" means that Company X is part of an industry with an HHI of 1,500 or lower. Along these lines, we decided to consider full membership in the set of "high cross-industry competition intensity" for companies that operate in countries with an MPI of 1,500 or lower.

Please note that for the sake of easier interpretation of the results, HHI and MPI are "reverse coded" so that low values of HHI and MPI represent high competition intensity.

Membership in the set "high revenue growth" means that a company had increased revenues by at least 45% compared with the previous year. This is based on industry considerations, where revenue growth of more than 45% for established companies is often considered high, and 5% revenue growth is considered regular growth (e.g., Baremetrics, 2020). All companies that experience zero revenue growth or less fall in the nonmembership group. We considered doubling profits high profit growth and a decrease in profits of at least 100% low profit growth. For "high profit growth" set membership, companies therefore must have at least doubled their profits compared with the previous year. Constant profits served as the 0.5 anchor, whereas companies that exhibited a loss of profits of at least 100% were put in the nonmembership group.

We used the following R packages to run the analysis: Dusa (2019) and Oana and Schneider (2018).

Results

Regression Analysis

Table 4 displays the main results from the regression analysis. For the sake of clarity, we do not show coefficients for the control variables (with the exception of the share of each report's paragraphs that included economic and societal goals), although they were included in all estimations (control variables are listed in the Method section).

Apart from the control variables mentioned above, we also included economic and societal goals to better understand the relationship between different types of goals. Unsurprisingly, societal and journalistic goals (noneconomic goals) were complementary, although there was no reliable statistical connection between economic and journalistic goals; statistical significance was only marginal in most cases and effect sizes were low, as denoted by the relative low values of the standardized regression coefficients.

We ran a total of four models for two reasons. First, we ran a separate analysis for the HHI and the MPI because they are conceptually closely related and are proxies for the same construct (competition intensity). Second, we also included squared terms of both the HHI and MPI to account for the possibility of decreasing marginal rates of return and eventually a nonlinear relationship between competition intensity and media performance (e.g., in the form of a unimodal function). This allowed us to test the hypothesis that an increase in competition has a positive impact on media performance only for low and medium levels of competition, and a negative impact for higher levels of competition, as put forward by the HA.

Table 4. Regression Results.

	Model			
Journalistic goals	1	2	3	4
Economic goals	.094**	.087*	.094**	.086*
Societal goals	.332***	.337***	.334***	.333***
HHI	-.232***	-.495**		
HHI_2		.261		
MPI			-.221***	-.388*
MPI_2				.175
PSM	-.180***	-.149**	-.198***	-.197***
R ²	.275	.276	.276	.275
Observed	474	474	474	474

Note. HHI = Hirschman–Herfindahl Index; MPI = National Media Power Index; PSM = public service media. Ordinary least squares estimates. Standardized regression coefficients. All models include year fixed effects. Shaded values indicate statistically significant effects of competition intensity.

* $p < 0.1$. ** $p < .05$. *** $p < .01$.

Results indicate that competition intensity has a positive impact on media performance. Higher values of both the HHI and MPI indicate lower levels of competition. In all four models, the linear coefficient for competition intensity (HHI, MPI) was statistically significant and negative, which is why lower competition levels lead to lower levels of media performance. At the same time, the quadratic terms in Models 2 and 4 exhibited no statistical significance. Considering that the data set included countries with very high concentration rates, and is therefore not restricted to low and medium levels of competition intensity, the results do not support a unimodal relationship between competition and media performance as hypothesized with the HA.

When it comes to the impact of a strong public service broadcasting sector on media performance, the results clearly imply a negative relationship. In all four models, the coefficient for the dummy variable PSM was negative, providing evidence for a kind of “crowding out” effect rather than PSM causing a “race to the top” with commercial media companies as claimed by the British Broadcasting Company (2013)

report. On the contrary, competition from PSM appears to incentivize commercial media companies to turn away from journalistic goals.

Fuzzy Set Qualitative Comparative Analysis

The two quality criteria to identify (combinations of) conditions as necessary or sufficient were consistency and coverage. First, the consistency criterion indicates “the degree to which the cases sharing a given combination of conditions . . . agree in displaying the outcome in question” (Ragin, 2008, p. 44). For necessary conditions, Ragin (2000) proposes a threshold value of 90% for consistency. In our sample, we did not find any necessary conditions for the outcome, nor did the analysis identify necessary conditions for the negated outcome (low media performance). We therefore turned to the identification of sufficient conditions.

The threshold of consistency for sufficient conditions, as proposed by Ragin (2008), was 80%. We also used a more conservative 90% threshold, as suggested by other research, which yielded solutions that included all five tested conditions and very low coverage. Given that the 80% threshold also matched the empirical data quite well, where the first substantial consistency gap in the truth table occurred between 0.806 and 0.782, we report only the results based on this threshold. Three potentially sufficient combinations of conditions for the high media performance outcome were identified: (1) high competition intensity (HHI) and no strong PSM sector, (2) high competition intensity (MPI) and no strong PSM sector, and (3) no strong PSM sector and high revenue growth and low net profit growth. The results are summarized in Table 5.

Table 5. Intermediate Solution for the Outcome “High Media Performance.”

Combination	Raw coverage	Unique coverage	Consistency
HHIf*psm	0.418	0.091	0.732
MPIf*psm	0.327	0.022	0.802
psm*REVGRf*npgrf	0.221	0.068	0.841
Solution coverage: 0.529			
Solution consistency: 0.744			

Note. HHI = Hirschman–Herfindahl Index; MPI = National Media Power Index; psm = public service media; REVGR = revenue growth; npgr = net profit growth. Intermediate solutions. Variables in capital letters indicate membership and lower case letters indicate nonmembership. *Indicates the logical link “and.” The letter “f” following a variable indicates fuzz set variables.

For reference, the parsimonious solution yielded the identical outcome as the intermediate solution presented in Table 5. The complex solution identified four potentially sufficient combinations of conditions for the high media performance outcome: HHIf*psm; mpif*psm*REVGRf; MPIf*psm*revgrf*npgrf; MPIf*psm*REVGRf*NPGRf (see Table 3 for variable definitions).

The coverage criterion represents the empirical relevance of a solution comparable to the goodness-of-fit/explained variance metric (R^2) in ordinary least squares regressions. The rather low coverage values imply that there were other sufficient conditions for high media performance that were not covered by our data set. Consequently, results from the fsQCA must be interpreted with caution. However, it is striking that

the absence of strong PSM was part of all and high competition intensity was part of most of the sufficient conditions, underscoring the results from the regression analysis and making a quite strong case for the importance of these two factors in causing high media performance.

As mentioned above, QCA is based on asymmetric causality. We therefore also needed to consider the negation of the outcome. When analyzing the data for necessary and sufficient conditions for the outcome "low media performance," we found no (combination of) conditions that met the consistency criteria.

Discussion and Conclusion

Employing a fixed effects regression analysis, as well as fsQCA, we found evidence for both a positive effect of competition intensity and a negative effect of a strong PSM sector on media performance from commercial media companies.

The results across four different models were highly consistent in the regression analysis. Both concentration rate variables (HHI and MPI) exhibited statistically significant negative coefficients, indicating a positive effect of competition intensity on media performance. We did not find any evidence of a curvilinear relationship as proposed by the FCA, HA, and research on diversity. The dummy variable for the existence of a strong PSM sector also showed statistical significance and implies a negative effect.

The QCA revealed three combinations of conditions that are sufficient for high media performance. Although all three combinations of conditions that form a sufficient condition rely on all of the conditions that are part of the respective combination, it is striking that high competition appeared in two of the three and the absence of a strong PSM sector appeared in all three combinations. We interpret this as confirmation of the results we obtained from the regression analysis.

Considering that we applied two analytical methods that are based on different logic, we find this to be a rather strong empirical case speaking in favor of competition having a positive impact on media performance, with the exception of PSM, which appear to crowd commercial companies out of the market for high-quality journalistic content.

For policymakers, this implies that competitive markets are in the public interest in terms of strengthening media performance and therefore the functioning of democratic societies. Although the negative impact of a strong PSM system on media performance could be used as an argument against such a system, it must be mentioned that the overall welfare effect of PSM can still be positive. For instance, PSM can potentially contribute significantly to an informed public, in particular because they are in large part independent of economic influences and because they are obliged to provide public service content by law. These effects should be emphasized when they have a significant market share, which corresponds to our definition of strong PSM. This is supported by empirical research (for a summary, see Nielsen, Fletcher, Sehl, & Levy, 2016). In addition, recent cross-national comparative research suggests that the economic performance of commercial media is not significantly affected by PSM (Sehl et al., 2020).

Our study contributes to existing research in several ways. First, our approach of operationalizing company media performance by using letters to shareholders in annual reports is new. Second, our data set comprised companies from 12 countries and five continents, significantly expanding the scope of existing research in this domain and providing new opportunities regarding the generalizability of the results. Third, we employed a combination of two empirical methods to validate our findings.

However, our research is also subject to several limitations. First, the validity of the data for dependent variables is hard to objectively assess. On the one hand, there is no hard calibration value for media performance, which makes external validation difficult. On the other hand, prior research has found letters to shareholders to be appropriate sources for the assessment of corporate goals and face validity appears to confirm this. In turn, we believe that the relative importance of journalistic goals should be a good proxy for media performance as it states the priority of the respective companies' priorities that should have, to a certain degree, a significant impact on output's public value. Second, we measured competition intensity with simple concentration measures (HHI and MPI), although competition can certainly also be subject to other qualitative aspects, such as whether markets are contestable (Baumol, Panzar, & Willig, 1982) and the degree of commodification of the product. Third, we only assessed competition factors; other (national) variables also certainly impact media performance (e.g., the local journalistic culture; Hallin & Mancini, 2004; Hanitzsch et al., 2019), and should be included in future research. Countries in our sample were also not selected systematically in terms of a most similar or most different systems design, but rather because of rough comparability conditions and data availability.

Fourth, we focused on competition at the national level even though competition has obviously become global in most media markets. However, this only applies to a limited extent to competition in journalism, which continues to take place strongly at the domestic level of every single country partly because its content is mostly locally oriented and language dependent. Furthermore, in terms of journalism, regulation and policymaking are still primarily taking place at the national level (Picard, 2020).

Amid digitization and platformization, traditional media companies are still perceived as key players in the production and distribution of journalism. Our research has applied a novel methodological approach in a cross-national context to shed light on competitive conditions under which these companies commit to specific journalistic goals and thus contribute to media performance. In doing so, we addressed a persistent gap in research on media competition and media performance, and identified avenues for media regulators.

Our analysis is dominated by established media companies that significantly rely on print and broadcasting. However, our findings on the relationship between competition and media performance could also be applied to the assessment of digital media markets, where competition intensity is amplified compared with traditional media markets. At the same time, it remains a challenge to empirically assess the effects of competition on market and journalistic outcomes for these relatively new digital markets, where market equilibria are unlikely to have emerged by now. This is why our study could contribute to a better understanding of the past in order to better shape the future.

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